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NMR Study of Slow Motions in κ -(ET)₂Cu[N(CN)₂]Br¹ TAK-KEI LUI, JOSEPH C. GEZO, RUSSELL W. GIANNETTA, CHARLES P. SLICHTER, University of Illinois at Urbana-Champaign, IL 61801, JOHN A. SCHLUETER, Material Sciences Division, Argonne National Laboratory, Argonne, IL 60439 — Like the high- T_C cuprates, the 2D organic superconductor κ -(ET)₂Cu[N(CN)₂]Br ($T_C = 11.9$ K) exhibits a pseudo-gapped phase above the superconducting transition, as indicated by the ¹³C spin-lattice relaxation rate ($1/T_1T$) peak at about 50 K. While ¹³C NMR has been used extensively to probe the pseudo-gapped regime, T_1 is only sensitive to fast motions in the MHz scale (Larmor frequency), and T_2 remains relatively constant in the pseudo-gapped regime. Neither T_1 nor T_2 give us any clue about any possible slow motions. We report measurements using the stimulated echo pulse sequence² which is capable of providing more detailed information on possible slow motions in the pseudo-gapped regime.

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Tak-Kei Lui
University of Illinois at Urbana-Champaign, IL 61801

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